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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,683	03/17/2004	Emmanuel Kanterakis	I-2-0075.7US	5370
24374	7590	09/20/2005	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			PHAN, HANH	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,683

Applicant(s)

KANTERAKIS ET AL.

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 05/05/2005.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,711,358 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the instant application are encompassed by claims 1-7 of U.S. Patent No. 6,711,358 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,711,358) discloses an optical interconnect comprising:

an input configured to receive light of a plurality of light wavelengths;

a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1, 3, 4 of U.S. Patent No. 6,711,358).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,711,358) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1, 3, 4 of U.S. Patent No. 6,711,358).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,711,358) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1, 3, 4 of U.S. Patent No. 6,711,358).

4. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,563,617 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the

instant application are encompassed by claims 1-7 of U.S. Patent No. 6,563,617 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,563,617) discloses an optical interconnect comprising:

- an input configured to receive light of a plurality of light wavelengths;

- a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

- a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

- a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1, 3, 4 of U.S. Patent No. 6,563,617).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,563,617) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1, 3, 4 of U.S. Patent No. 6,563,617).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,563,617) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1, 3, 4 of U.S. Patent No. 6,563,617).

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5. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,426,818 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the instant application are encompassed by claims 1-8 of U.S. Patent No. 6,426,818 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,426,818) discloses an optical interconnect comprising:

an input configured to receive light of a plurality of light wavelengths;

a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1 and 5 of U.S. Patent No. 6,426,818).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,426,818) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1 and 5 of U.S. Patent No. 6,426,818).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,426,818) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1 and 5 of U.S. Patent No. 6,426,818).

6. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,373,605 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the instant application are encompassed by claims 1-4 of U.S. Patent No. 6,373,605 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,373,605) discloses an optical interconnect comprising:

- an input configured to receive light of a plurality of light wavelengths;

- a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

- a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each

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holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1-4 of U.S. Patent No. 6,373,605).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,373,605) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1-4 of U.S. Patent No. 6,373,605).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,373,605) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1-4 of U.S. Patent No. 6,373,605).

7. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,243,180 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the instant application are encompassed by claims 1-5 of U.S. Patent No. 6,243,180 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,243,180) discloses an optical interconnect comprising:

an input configured to receive light of a plurality of light wavelengths;

a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1-5 of U.S. Patent No. 6,243,180).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,243,180) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1-5 of U.S. Patent No. 6,243,180).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,243,180) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1-5 of U.S. Patent No. 6,243,180).

8. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,008,918 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the

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instant application are encompassed by claims 1-9 of U.S. Patent No. 6,008,918 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 6,008,918) discloses an optical interconnect comprising:

- an input configured to receive light of a plurality of light wavelengths;

- a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

- a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

- a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 5 and 6 of U.S. Patent No. 6,008,918).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 6,008,918) discloses wherein the holographic elements are configured in a linear arrangement (see claims 5 and 6 of U.S. Patent No. 6,008,918).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 6,008,918) discloses wherein the beam splitters are configured in a linear arrangement (see claims 5 and 6 of U.S. Patent No. 6,008,918).

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9. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 5,515,194 (Kanterakis et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-3 of the instant application are encompassed by claims 1-30 of U.S. Patent No. 5,515,194 (Kanterakis et al).

Regarding claim 1, Kanterakis et al (U.S. Patent No. 5,515,194) discloses an optical interconnect comprising:

an input configured to receive light of a plurality of light wavelengths;

a plurality of holographic optical elements, each element configured to reflect one out of the plurality of light wavelengths and allowing others of the plurality of wavelengths to not be reflected;

a plurality of prisms, each of the plurality of prisms is configured to rotate received light at a different angle than any of the other prisms, wherein for each holographic optical element, one of the plurality of prisms is positioned to receive and rotate light reflected by that holographic element;

a plurality of beam splitters, each beam splitter positioned to receive light rotated by a respective one of the plurality of prisms and all the plurality of beam splitters directing light to an output of the optical interconnect (see claims 1 and 10-28 of U.S. Patent No. 5,515,194).

Regarding claim 2, Kanterakis et al (U.S. Patent No. 5,515,194) discloses wherein the holographic elements are configured in a linear arrangement (see claims 1 and 10-28 of U.S. Patent No. 5,515,194).

Regarding claim 3, Kanterakis et al (U.S. Patent No. 5,515,194) discloses wherein the beam splitters are configured in a linear arrangement (see claims 1 and 10-28 of U.S. Patent No. 5,515,194).

Response to Arguments

10. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER